

PATENT APPLICATION TRANSMITTAL LETTER

(Large Entity)

Docket No.

INTL-0482-US (P10030)

TO THE ASSISTANT COMMISSIONER FOR PATENTS

Transmitted herewith for filing under 35 U.S.C. 111 and 37 C.F.R. 1.53 is the patent application of:

ERIC C. HANNAH AND MICHAEL BOYD

For: ENSURING THAT ADVERTISEMENTS ARE PLAYED

Enclosed are:

- ☒ Certificate of Mailing with Express Mail Mailing Label No. EL669041672US
- ☒ Two (2) sheets of drawings.
- ☐ A certified copy of a application.
- ☒ Declaration ☒ Signed. ☐ Unsigned.
- ☒ Power of Attorney
- ☐ Information Disclosure Statement
- ☐ Preliminary Amendment
- ☒ Other: Recordation Form Cover Sheet, Assignment and check for \$40.

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	26	- 20 =	6	x \$18.00	\$108.00
Indep. Claims	3	- 3 =	0	x \$80.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$710.00
TOTAL FILING FEE					\$818.00

- ☒ A check in the amount of \$818.00 to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge and credit Deposit Account No. 20-1504. as described below. A duplicate copy of this sheet is enclosed.
 - ☐ Charge the amount of as filing fee.
 - ☒ Credit any overpayment.
 - ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
 - ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: October 17, 2000

Signature
 Timothy N. Trop, Reg. No. 28,994
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cc:

Customer No. 21906

APPLICATION

FOR

UNITED STATES LETTERS PATENT

TITLE: ENSURING THAT ADVERTISEMENTS ARE PLAYED

INVENTORS: ERIC C. HANNAH AND MICHAEL BOYD

Express Mail No. EL669041672US

Date: October 17, 2000

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ENSURING THAT ADVERTISEMENTS ARE PLAYED

Background

This invention relates generally to advertising
insertion in audio, video, game, or software content
5 distribution systems.

Systems are available for distributing a wide variety
of content to users. In some cases, the users may select a
particular content they wish to play. In many cases, it is
desirable to insert commercials or advertisements into the
10 content as the content is selected.

In one model, in return for a given number of
advertisement viewings, the user may be entitled to play a
certain amount of content. Thus, it is important to ensure
that the user actually plays the advertising material.

15 A variety of stripping programs, fast forwarding
functions, muting and masking functions are available in
digital playback devices. The risk arises for advertisers
that the users may avoid actually playing the advertising
material in a human understandable way. If the advertising
20 material is never played, it will have no effect.

The net effect of such circumvention may be that free
or low cost content may not be made available. In other
words, if advertisers cannot be assured that the
advertising will actually be played (as opposed to being

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circumvented), they may be unwilling to subsidize the electronic distribution of content.

Therefore, there is a need for a way to ensure that advertising material inserted in content is actually played
5 as originally designed and intended by the advertiser.

Brief Description of the Drawings

Figure 1 is a block diagram of one embodiment of the present invention; and

Figure 2 is a flow chart for software, in accordance
10 with one embodiment of the present invention.

Detailed Description

Referring to Figure 1, a processor-based system 10 may include a media player 60 that plays electronic content. Electronic content may include video such as television,
15 audio, games, software, or other media. The media player 60 may be, for example, a compact disk player, a magnetic card reader, an MP-3 player, or a digital video disk player, as examples.

The processor-based system 10 may be a conventional
20 desktop computer system, a set-top box, or a processor-based appliance, as examples. The processor-based system 10 may include the media player 60, a display system 54 for displaying visual material and a sound system 56 for playing audio material.

The processor-based system 10 includes a processor 40 coupled to a host bus 42. The host bus 42 couples a north bridge 44, a system memory 48, and a level two or L2 cache 46.

5 The north bridge 44 is in turn coupled to a bus 50 that couples to the display 54 through the display controller 52. The display 54 may be a conventional computer monitor or it may be a television receiver, as examples. Also coupled to the bus 50 is an audio
10 accelerator 58b. The audio accelerator 58b is coupled to a digital-to-analog converter 26 that in turn is coupled to the sound system 56. The sound system 56 may include speakers 16' and 16".

Also, coupled to the bus 50 is a south bridge 62. The
15 south bridge 62 is coupled to hubs that in turn couple to the media player 60 and a storage 66 such as a hard disk drive. Software 90 for implementing certain features of one embodiment of the present invention may be stored on the storage 66.

20 Also coupled to the south bridge 62, is an additional bus 76. The bus 76 is in turn coupled to a serial input/output (SIO) device 78 and a basic input/output system (BIOS) storage 88. The bus 78 may be coupled to a keyboard 80, a modem 84, and other peripheral devices 82,
25 for example, for allowing games to be played.

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The modem 84 may allow the processor-based system 10 to be coupled to a content distribution system such as the Internet. In addition, content may be received through airwave broadcasts, satellite systems, or cable television systems, as additional examples. In each case, the content may be provided to the system 10 over any available transport.

Coupled to the digital-to-analog converter 26 is a watermark detector 60. The watermark detector 60 detects whether watermarks present in the content received from a content provider are actually played as intended. For example, the watermark detector 60 may detect whether the watermarked material is played in full at the predetermined play speed and is not otherwise muted, masked, fast-forwarded or stripped from the content. The watermark detector 60 may be coupled to the media player 60 to control the play of content on the media player 60. Thus, content may not be played through the system 10 unless certain advertising material containing a watermark is played as originally intended.

The watermark may be a faint signal that is embedded in the advertising content, that is unstrippable and may not be degraded without degrading the desired content to an unacceptable extent. The faint signal may be designed to be undetectable by users. Watermarks are commonly used with content to protect them from being digitized or re-

sampled in the output/analog domain for resubmission to players as "copy always" material. Thus, watermarks are traditionally used to prevent or reveal theft of proprietary material.

5 These same watermarks may also be detected by the watermark detector 60 to ensure that watermarked advertising material is played as originally intended. Thus, advertising material that includes a watermark with an appropriate security code may be detected by the
10 watermark detector 60. The watermark detector 60 may determine the fidelity of the watermark and the time when the watermark is activated. The detector 60 may ensure that the advertising material is not fast forwarded or otherwise altered.

15 The watermark detector 60 may directly monitor the video or audio input/output channels to ensure that the channels correctly extract the advertising watermark if, and only if, the advertising is played by the digital output channel at the proper rate and for the duration of
20 the advertising, with no extraneous masking. The extracted advertising security code or watermark is then returned to a media player application to allow decryption of the remaining content by the media player 60.

 Alternatively, the watermark may be utilized to accrue
25 digital coupons in return for playing the advertising. That is, instead of only controlling the play of content,

the detection of the watermarks in the advertising may also be used to accrue rewards or benefits to users who actually play the advertisements as originally designed.

As still another example, the watermark may be
5 extracted and a security code may be parsed from the watermark. This information may be combined by the processor-based system 10 with an identifier for a particular user. Thus, the advertisement together with the user identifier may be collected for market research
10 purposes.

The watermark detector 60 may be utilized with content that is recorded on a medium such as a magnetic disk as well as content that is received with the watermark over an appropriate distribution network, such as the Internet, or
15 even a television distribution network such as an airwave, cable or satellite network.

Turning to Figure 2, the software 90 stored on the storage 66, in accordance with one embodiment of the present invention, may initially determine whether the time
20 for a commercial has arrived, as indicated in diamond 92. In one embodiment, commercials may be inserted at predetermined times. In such case, the software 90 may begin by determining if a commercial insertion time has arrived. In other embodiments in which the commercials are
25 provided automatically, for example, before the content is

actually played, the act illustrated by the diamond 92 may be unnecessary.

Once it has been determined that there is reason to monitor the play of a commercial, a check at diamond 94
5 determines whether the detector flag has been set. The detector flag may be set by the watermark detector 60 when the watermark detector 60 determines that a commercial has been played appropriately. This may include determining whether the commercial is played for the desired amount of
10 time and at the desired speed.

This determination that the commercial was played correctly may be based on stored, predetermined characterizing information for all or a variety of commercials. For example, it may be known that all
15 commercials have a predetermined speed and a predetermined duration. Alternatively, the watermark detector 60 may access a database either on the system 10 or externally thereof to determine the characteristics of a given commercial, for example, in a given piece of content, or at
20 a given time. The watermark detector 60 may then compare that information to what is actually detected through the digital-to-analog converter 26.

In any case, if the detector 60 determines that the advertisement has been correctly played, in one embodiment
25 of the present invention, it may set a flag for the software 90 to detect. When the flag setting is detected,

the software 90 reports a play validation as indicated at block 96. In other words, the software 90 may report to external sources that the advertisement was actually played by a given processor-based system 10 as intended. This
5 feedback to the advertiser may provide confirmation that in fact the advertising program is being executed as intended. It may also be utilized to develop statistics in some embodiments.

Next, in some embodiments, the advertisement
10 identifier may be added to a particular user's profile as indicated in block 98. A user profile may be developed for everyone who uses a given processor-based system 10. This profile may be developed by requiring a password to begin using the system 10. As a result, a profile may be
15 developed indicating which commercials are viewed by particular users.

This user profile information may be utilized to award credits, points, or rewards to particular users based on their commercial viewing practices. In addition, the
20 profile may be provided to marketing operations for targeted advertisements for particular users.

Next, the media player 60 may be unlocked as indicated in block 100. In one embodiment, this may mean that a key is provided for decrypting encrypted content and allowing
25 the play of that content in return for having watched a commercial. As another example, the media player 60 may be

allowed to actually operate to play the rest of the content. In still another embodiment, the system 10 either decrypts or allows the play of content received from an external source.

5 While the present invention has been described with respect to a limited number of embodiments, those skilled in the art will appreciate numerous modifications and variations therefrom. It is intended that the appended claims cover all such modifications and variations as fall
10 within the true spirit and scope of this present invention.

What is claimed is:

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1 14. The article of claim 13 further storing
2 instructions that enable the processor-based system to
3 accumulate rewards for successively playing advertisements.

1 15. The article of claim 11 further storing
2 instructions that enable the processor-based system to
3 determine that an advertisement was played at the
4 predetermined speed.

1 16. The article of claim 11 further storing
2 instructions that enable the processor-based system to
3 monitor the play of a recorded advertisement.

1 17. The article of claim 11 further storing
2 instructions that enable the processor-based system to
3 determine whether the advertisement was played at an
4 intended time.

1 18. The article of claim 11 further storing
2 instructions that enable the processor-based system to
3 monitor a watermark included with said advertisement.

1 19. The article of claim 11 further storing
2 instructions that enable the processor-based system to

1 24. The system of claim 22 wherein said storage
2 stores instructions that enable the device to accrue a
3 reward in return for playing the advertisement.

1 25. The system of claim 21 wherein said watermark
2 detector determines whether an advertisement was played at
3 a predetermined speed.

1 26. The system of claim 21 wherein said storage
2 stores content for subsequent replay by said media player.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2
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A system may confirm that advertising was played as originally intended. For example, in one embodiment, a system may determine that an advertisement was played as originally intended and in return, a credit may be provided to the user. This credit may be the ability to play content that the user wishes to play or the credit may be in the form of rewards that are provided to the user, as another example. Thus, the system determines whether the advertisements are played correctly, for example, by detecting watermarks encoded within the advertising, and in return, provides indications that reward the user for playing the advertisement as intended.

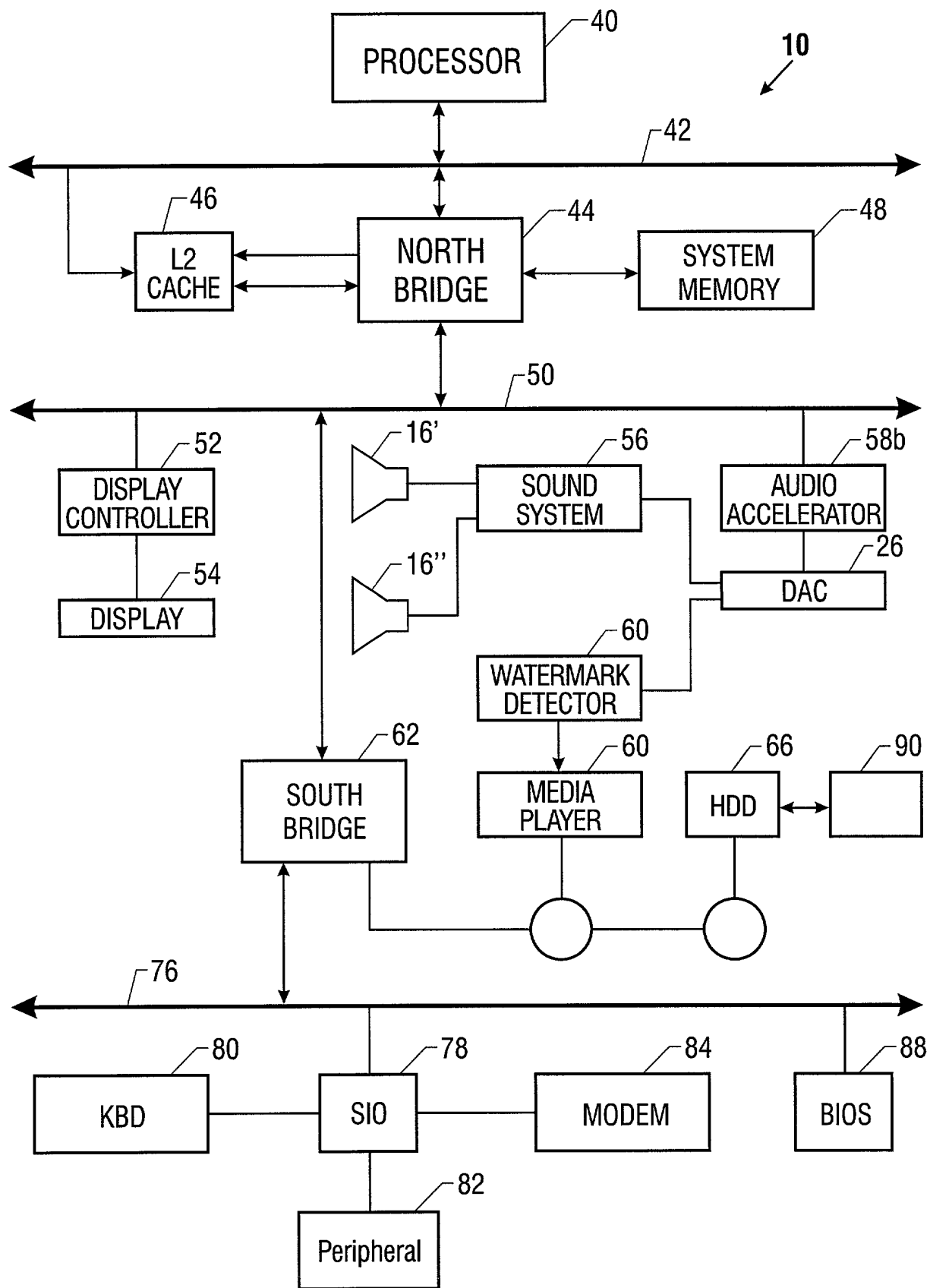


FIG. 1

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below, next to my name.

I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

ENSURING THAT ADVERTISEMENTS ARE PLAYED

the specification of which

X	is attached hereto.
	was filed on _____ as
	United States Application Number _____
	or PCT International Application Number _____
	and was amended on _____
	(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above. I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, and that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s):			Priority Claimed	
Number	(Country)	(Day/Month/Year Filed)	Yes	No

I hereby claim the benefit under title 35, United States Code, Section 119(e) of the United States provisional application(s) listed below:

_____ (Application Number)	_____ (Filing Date)
_____ (Application Number)	_____ (Filing Date)

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:


_____ (Application Number)	_____ Filing Date	_____ (Status-patented, pending, abandoned)
_____ (Application Number)	_____ Filing Date	_____ (Status-patented, pending, abandoned)

I hereby appoint Timothy N. Trop, Reg. No. 28,994; Fred G. Pruner, Jr., Reg. No. 40,779 and Dan C. Hu, Reg. No. 40,025 my patent attorneys, of TROP, PRUNER & HU, P.C., with offices located at 8554 Katy Freeway, Ste. 100, Houston, TX 77024, telephone (713) 468-8880, and Mirho, Charles A.; Registration No. 41,199; Novakoski, Leo V.; Registration No. 37,198; Reynolds, Thomas C.; Registration No. 32,488; Seddon, Kenneth M.; Registration No. 43,105; Seeley, Mark; Registration No. 32,299; Skabrat, Steven P.; Registration No. 36,279; Skaist, Howard A.; Registration No. 36,008; Su, Gene I.; Registration No. 45,140; Wells, Calvin E.; Registration No. 43,256; Werner, Raymond J.; Registration No. 34,752; Winkle, Robert G.; Registration No. 37,474; and Young, Charles K.; Registration No. 39,435 my patent attorneys, of INTEL CORPORATION with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

Send correspondence to Timothy N. Trop, TROP, PRUNER & HU, P.C., 8554 Katy Freeway, Ste. 100, Houston, TX 77024 and direct telephone calls to Timothy N. Trop, (713) 468-8880.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

ERIC C. HANNAH

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10/9/00

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MICHAEL BOYD

Inventor's Signature: 

Date: 10/9/00

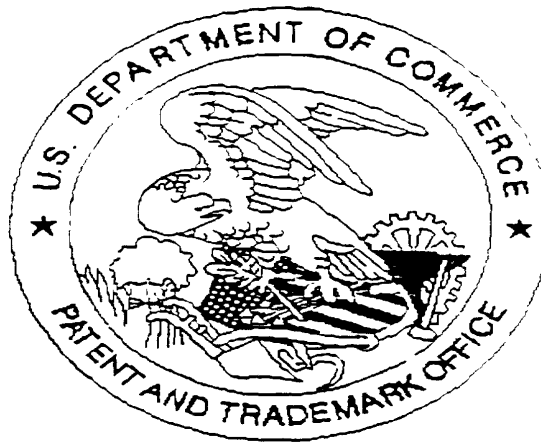
LAKEPORT, CALIFORNIA

U.S.

923 19TH STREET, LAKEPORT, CALIFORNIA 94953

Table 1. Demographic characteristics of the study population	
Age (years)	50.0 ± 10.0
Gender (male/female)	100/100
Marital status (married/divorced/separated)	100/100/0
Education (years)	12.0 ± 2.0
Occupation (white/blue)	100/100
Income (USD/month)	1,000.0 ± 200.0
Smoking status (smoker/non-smoker)	50/50
Alcohol consumption (yes/no)	20/80
Family history of hypertension (yes/no)	30/70
Duration of hypertension (years)	5.0 ± 3.0
Current antihypertensive treatment (yes/no)	100/0
Medication (type/dose)	100/0
Comorbidities (diabetes/cholesterol)	20/30
Quality of life (SF-36 score)	50.0 ± 10.0
Healthcare utilization (visits/year)	2.0 ± 1.0
Health insurance (yes/no)	100/0
Health literacy (high/low)	50/50
Health beliefs (strong/weak)	50/50
Health behaviors (healthy/unhealthy)	50/50
Health status (stable/unstable)	50/50
Health outcomes (improved/worsened)	50/50
Health satisfaction (satisfied/dissatisfied)	50/50
Health motivation (high/low)	50/50
Health knowledge (adequate/inadequate)	50/50
Health awareness (high/low)	50/50
Health responsibility (high/low)	50/50
Health control (high/low)	50/50
Health empowerment (high/low)	50/50
Health participation (high/low)	50/50
Health collaboration (high/low)	50/50
Health communication (high/low)	50/50
Health decision-making (high/low)	50/50
Health problem-solving (high/low)	50/50
Health coping (high/low)	50/50
Health resilience (high/low)	50/50
Health recovery (high/low)	50/50
Health adaptation (high/low)	50/50
Health adjustment (high/low)	50/50
Health integration (high/low)	50/50
Health inclusion (high/low)	50/50
Health participation (high/low)	50/50
Health collaboration (high/low)	50/50
Health communication (high/low)	50/50
Health decision-making (high/low)	50/50
Health problem-solving (high/low)	50/50
Health coping (high/low)	50/50
Health resilience (high/low)	50/50
Health recovery (high/low)	50/50
Health adaptation (high/low)	50/50
Health adjustment (high/low)	50/50
Health integration (high/low)	50/50
Health inclusion (high/low)	50/50
Health participation (high/low)	50/50
Health collaboration (high/low)	50/50
Health communication (high/low)	50/50
Health decision-making (high/low)	50/50
Health problem-solving (high/low)	50/50
Health coping (high/low)	50/50
Health resilience (high/low)	50/50
Health recovery (high/low)	50/50
Health adaptation (high/low)	50/50
Health adjustment (high/low)	50/50
Health integration (high/low)	50/50
Health inclusion (high/low)	50/50
Health participation (high/low)	50/50
Health collaboration (high/low)	50/50
Health communication (high/low)	50/50
Health decision-making (high/low)	50/50
Health problem-solving (high/low)	50/50
Health coping (high/low)	50/50
Health resilience (high/low)	50/50
Health recovery (high/low)	50/50
Health adaptation (high/low)	50/50
Health adjustment (high/low)	50/50
Health integration (high/low)	50/50
Health inclusion (high/low)	50/50
Health participation (high/low)	50/50
Health collaboration (high/low)	50/50
Health communication (high/low)	50/50
Health decision-making (high/low)	50/50
Health problem-solving (high/low)	50/50
Health coping (high/low)	50/50
Health resilience (high/low)	50/50
Health recovery (high/low)	50/50
Health adaptation (high/low)	50/50
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Health problem-solving (high/low)	50/50
Health coping (high/low)	50/50
Health resilience (high/low)	50/50
Health recovery (high/low)	50/50
Health adaptation (high/low)	50/50</

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